

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
18 August 2005 (18.08.2005)

PCT

(10) International Publication Number  
**WO 2005/076459 A1**

(51) International Patent Classification<sup>7</sup>: **H02P 7/05**

(21) International Application Number:  
PCT/GB2005/000296

(22) International Filing Date: 27 January 2005 (27.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0402528.4 5 February 2004 (05.02.2004) GB

(71) Applicant (for all designated States except US): **DYSON TECHNOLOGY LIMITED** [GB/GB]; Tetbury Hill, Malmesbury Wiltshire SN16 0RP (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CLOTHIER, Andrew, Charlton** [GB/GB]; 3 Hill Hayes Lane, Hullavington, Chippenham Wiltshire SN14 6EB (GB). **GREETHAM, Stephen** [GB/GB]; 9A Hawthorn Close, Charfield South Gloucestershire GL12 8TX (GB). **DAI, Hanping** [CN/GB]; 5 Windsor Close, Chippenham Wiltshire SN14 0QT (GB).

(74) Agents: **HUCKER, Nerys et al.**; Intellectual Property Department, Dyson Technology Limited, Tetbury Hill, Malmesbury Wiltshire SN16 0RP (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

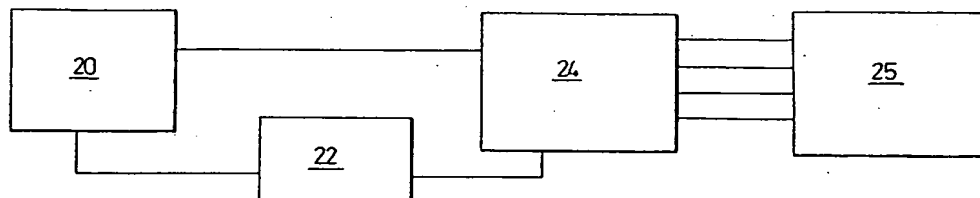
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: CONTROL OF ELECTRICAL MACHINES



(57) Abstract: An electrical machine, such as a switched reluctance motor (25), has a rotor and a controller (24) arranged to energise at least one electrically energisable phase winding in dependence on the angular position of the rotor. The controller typically employs a control law table that was derived by applying a predetermined DC link voltage to the windings. Differences between an applied DC link voltage (20) and the predetermined DC link voltage may be compensated by applying a predetermined correction to the angular position of energisation of the phase winding in dependence on the value of the applied DC link voltage. Such a compensation factor may be derived from a relationship held in memory.